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What is claimed is:

- 5 1. Image storage screen or panel comprising a binderless needle-shaped stimuable phosphor of CsBr:Eu, wherein amounts of Eu-dopant are in the range of from 100 up to 400 p.p.m. versus CsBr, and a substrate, and wherein said substrate has a surface roughness of less than 2 μm and a reflectivity of more than 80%.
- 10 2. Image storage screen or panel according to claim 1, wherein said binderless needle-shaped stimuable phosphor has from 100 up to 200 p.p.m. of Eu-dopant versus CsBr.
3. Screen or panel according to claim 1, wherein said reflectivity is at least 90%.
- 15 4. Screen or panel according to claim 2, wherein said reflectivity is at least 90%.
5. Screen or panel according to claim 1, wherein said reflectivity is at least 95%.
6. Screen or panel according to claim 2, wherein said reflectivity is at least 95%.
- 20 7. Screen or panel according to claim 1, wherein said substrate has a surface roughness of less than 1 μm .
8. Screen or panel according to claim 2, wherein said substrate has a surface roughness of less than 1 μm .
- 25 9. Screen or panel according to claim 3, wherein said substrate has a surface roughness of less than 1 μm .
10. Screen or panel according to claim 4, wherein said substrate has a surface roughness of less than 1 μm .

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11. Screen or panel according to claim 5, wherein said substrate has a surface roughness of less than 1 μm .
12. Screen or panel according to claim 6, wherein said substrate has a surface roughness of less than 1 μm .
- 5 13. Screen or panel according to claim 1, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
14. Screen or panel according to claim 2, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
15. Screen or panel according to claim 3, wherein said substrate is
10 an amorphous carbon layer, overcoated with a reflecting layer.
16. Screen or panel according to claim 4, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
17. Screen or panel according to claim 5, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 15 18. Screen or panel according to claim 6, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
19. Screen or panel according to claim 7, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
20. Screen or panel according to claim 8, wherein said substrate is
20 an amorphous carbon layer, overcoated with a reflecting layer.
21. Screen or panel according to claim 9, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
22. Screen or panel according to claim 10, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.

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23. Screen or panel according to claim 11, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
24. Screen or panel according to claim 12, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 5 25. Screen or panel according to claim 13, wherein said reflecting layer is a metal layer.
26. Screen or panel according to claim 14, wherein said reflecting layer is a metal layer.
27. Screen or panel according to claim 13, wherein said reflecting
10 layer is an aluminum layer.
28. Screen or panel according to claim 14, wherein said reflecting layer is an aluminum layer.
29. Use of a screen or panel according to claim 1, in a system for computed radiography.
- 15 30. Use of a screen or panel according to claim 2, in a system for computed radiography.
31. Use of a screen or panel according to claim 3, in a system for computed radiography.
32. Use of a screen or panel according to claim 4, in a system for
20 computed radiography.
33. Use of a screen or panel according to claim 5, in a system for computed radiography.
34. Use of a screen or panel according to claim 6, in a system for computed radiography.

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35. Use of a screen or panel according to claim 7, in a system for computed radiography.
36. Use of a screen or panel according to claim 8, in a system for computed radiography.
- 5 37. Use of a screen or panel according to claim 9, in a system for computed radiography.
38. Use of a screen or panel according to claim 10, in a system for computed radiography.
39. Use of a screen or panel according to claim 11, in a system for
10 computed radiography.
40. Use of a screen or panel according to claim 12, in a system for computed radiography.
41. Use of a screen or panel according to claim 13, in a system for computed radiography.
- 15 42. Use of a screen or panel according to claim 14, in a system for computed radiography.
43. Use of a screen or panel according to claim 15, in a system for computed radiography.
44. Use of a screen or panel according to claim 16, in a system for
20 computed radiography.
45. Use of a screen or panel according to claim 17, in a system for computed radiography.
46. Use of a screen or panel according to claim 18, in a system for computed radiography.

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47. Use of a screen or panel according to claim 19, in a system for computed radiography.

48. Use of a screen or panel according to claim 20, in a system for computed radiography.

5 49. Use of a screen or panel according to claim 21, in a system for computed radiography.

50. Use of a screen or panel according to claim 22, in a system for computed radiography.

10 51. Use of a screen or panel according to claim 23, in a system for computed radiography.

52. Use of a screen or panel according to claim 24, in a system for computed radiography.

53. Use of a screen or panel according to claim 29, in mammographic applications.

15 54. Use of a screen or panel according to claim 30, in mammographic applications.

55. Use of a screen or panel according to claim 31, in mammographic applications.

20 56. Use of a screen or panel according to claim 32, in mammographic applications.